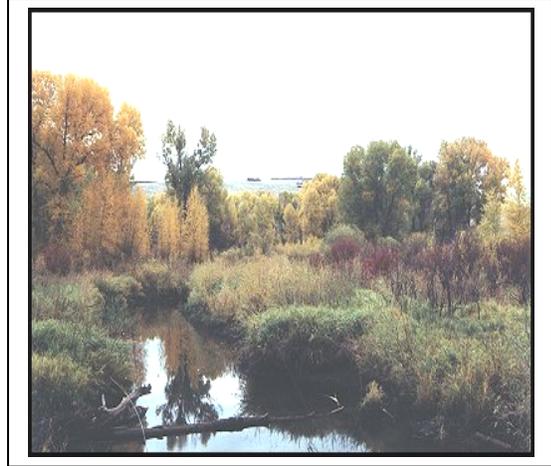


Animal Enhancement Activity – ANM13- Non-forested Riparian Zone Enhancement for Fish and Wildlife



Enhancement Description

Utilizing select conservation measures such as re-locating equipment operations, trails, or livestock; establishing diverse native vegetation and controlling invasive species; fencing; and extending the width of the riparian zone to enhance wildlife habitat adjacent to riparian zones of streams, ponds, lakes, or wetlands.

Land Use Applicability

This enhancement is applicable on cropland, pasture land and rangeland.

Benefits

Intact riparian zones with a natural and diverse mix of herbaceous and /or woody vegetation of different ages are important landscape features for sustaining fish and wildlife populations. Maintaining vigorous native or natural riparian vegetation of diverse age classes and species will benefit riparian and aquatic fauna by providing: (a) thermal, nesting/fawning, and hiding cover in riparian zones, stream banks, and shorelines; (b) diverse food sources; (c) a steady source of leaves, brush, small woody material for aquatic food webs at and downstream of the site; (d) root systems to enhance bank stability, and (e) vegetative filters for surface water run-off.

Criteria for Non-forested Riparian Zone Enhancement for Fish and Wildlife

1. For streams, rivers, or floodplains adjacent to pastures, cropland, hayland, or rangeland, enhance and maintain a well-vegetated riparian zone that is 2.5 times the width of the stream channel or 35 feet, whichever is greater. Improve the diversity of native or natural woody and/or herbaceous plant species suitable for the site and appropriate for the riparian and aquatic species that inhabit the area by planting appropriate species. In addition, implement at least one of the management actions from the list below.
2. For ponds, floodplain wetlands, or lakes adjacent to pastures, cropland, hayland or rangeland, enhance and maintain a well-vegetated riparian zone that is 35 feet wide or greater. Improve the diversity of native or natural woody and/or herbaceous plant species suitable for the site and appropriate for the riparian and aquatic species that inhabit the area by planting appropriate species. In addition, implement at least one of the management actions from the list below.

Additional management actions for enhancing non-wooded riparian zones:

1. Control invasive species thru a grazing management plan or suitable pest management techniques.



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2. Limit livestock use of riparian zone thru a prescribed grazing management plan
3. Control access of people, machinery, and livestock to the riparian zone with fencing.
4. Provide off-site watering source(s) for livestock.

Documentation Requirements

- Provide written documentation, including a map, of all riparian zone activities implemented to meet the requirements of this enhancement.
- List of maintenance activities carried out on riparian acres as prescribed under the practice used, and its specific fish and wildlife considerations.



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NH State Supplement

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 Enhancement for Fish and Wildlife**

Criteria

For Extending Herbaceous Riparian Buffers:

Do not plant Reed Canary Grass. The following mixes are acceptable for this enhancement. Shrub plantings are also beneficial. Especially in areas where few of the listed shrubs are near to the site so natural regeneration will be slow or unsuccessful. Note: some plantings for pollinators can be toxic to livestock, for more information refer to the Northeast Pollinator Technical Note or the USDA Plants Database.

For moderately well and well drained sites recommended species include:

Species	lbs/ac of seed
Orchardgrass	10
Smooth Bromegrass	5
Medium Red Clover	5
Timothy	5
Redtop	5

For somewhat and poorly drained sites recommended species include:

Species	lbs/ac of seed
Orchardgrass	7
Redtop	5
Red Clover	5
Kentucky Bluegrass	7
Perennial ryegrass	5
Ladino clover	1

For sandy excessively-well drained sites recommended species include:

<u>Species</u>	<u>lbs/ac of seed</u>
Big Blue Stem	3
Little Blue Stem	5
Sand Love Grass	4
Creeping Red Fescue	5
Virginia Wild Rye	5
Red Top	5

Suggested Shrub Species for Riparian Buffer Plantings

Shrub Species		Wet Site	Dry Site	Pollinator	Wildlife Mast
Scientific Name	Common Name				
<i>Amelanchier canadensis</i>	shadblow serviceberry		X	X	X
<i>Amelanchier laevis</i>	allegheeny serviceberry		X	X	X
<i>Corylus americana</i>	hazelnut		X		X
<i>Rhus typhina</i>	staghorn sumac		X	X	X
<i>Sambucus canadensis</i>	common elderberry	X		X	X
<i>Viburnum dentatum</i>	arrowwood viburnum	X		X	X
<i>Aronia melanocarpa</i>	Black Chokeberry		X	X	X
<i>Cornus racemosa</i>	Grey Dogwood	X		X	X
<i>Cornus sericea</i>	Redosier Dogwood	X		X	X
<i>Hamamelis virginiana</i>	Witch Hazel	X		X	X
<i>Rubus</i>	Red and Black Raspberry		X	X	X
<i>Salix</i>	Native Willows (shinning, Bebb's, slender leaf, heart Shapped etc	X		X	
<i>Vaccinium corymbosum</i>	high bush blueberry	X	X	X	X
<i>Viburnum Casinoidies</i>	Northern Wild Raisin	X		X	X
<i>Viburnum lentago</i>	nannyberry	X		X	X

Suggested Seed Mix for variable Upland/Wetland Conditions

The following type mix can be useful for seeding down past sacrifice areas along streams where topography is undulating. The draw back on native species such as these is they need to be seeded in the fall to cold stratify, other wise they will not germinate. In addition, they are more expensive than the grass mixes above.

Botanical Name	Common Name	Ind.	Lbs/A
<i>Agrostis stolonifera</i>	Creeping Bentgrass	FACW	2.5
<i>Andropogon gerardii</i>	Big Bluestem,	FAC	3.5
<i>Aster novae-angliae</i>	New England Aster	FACW-	0.25
<i>Carex vulpinoidea</i>	Fox Sedge	OBL	1.75
<i>Elymus virginicus</i>	Virginia Wild Rye	FACW-	8.75
<i>Eupatorium perfoliatum</i>	Boneset	FACW	1

Euthamia graminifolia	Grass Leaved Goldenrod	FAC	0.25
Festuca rubra	Creeping Red Fescue	FACU	8.75
Juncus effusus	Soft Rush	FACW+	1
Onoclea sensibilis	Sensitive Fern	FACW	0.25
Panicum virgatum	Switch Grass	FAC	1.75
Schizachyrium scoparium	Little Bluestem	FACU	3.5
Scirpus atrovirens	Green Bulrush	OBL	0.5
Scirpus cyperinus	Wool Grass	FACW	1
Verbena hastata	Blue Vervain	FACW	0.25
		Total	35